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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,852	09/29/2000	Moriyuki Koike	197937US2	7282

22850 7590 06/10/2005

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EXAMINER

POON, KING Y

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/672,852	Applicant(s) KOIKE ET AL.	
	Examiner King Y. Poon	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004 and 28 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) 1-18,45-78,81 and 82 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-44 is/are rejected.
- 7) ☒ Claim(s) 79 and 80 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of restriction requirement in the reply filed on 2/28/2005 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 27, 29, 30, 31, 40, 42, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobiondo in view of Satake (6,078,759) and Imamura (US 5,963,717).

In accordance with claims 27 and 40, Lobiondo discloses an image forming system with at least two units of digital copying machines 10 (figure 1) connected to each other and in which a plurality of the connected digital copying machines can share and execute one job (col. 4 lines 16-19).

Lobiondo further discloses that each of the digital copying machines 10 has a link copy function that a document set in one of the digital copying machines and at least two units of the digital copying machines share the job of executing copy operation on said document, and a printer function of printing according to a print request from the outside; Lobiondo discloses that the printing devices 10 of his system can share a job

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being processed in a linked manner (col. 4 lines 16-19), he further discloses that the type of data being printed can be print jobs sent from a computer (col. 3 lines 32-36), copy data or facsimile data (col. 3 lines 60-63 and col. 4 lines 35-39).

Lobiondo further discloses that the apparatus displays a message that it is operating (col. 6 lines 29-34).

Lobiondo allows the user to set the time at which the job should be completed (col. 6 lines 22-25). The system the automatically interrupts a job in progress if the inputted time cannot be achieved without interruption (col. 5 lines 6-9), implicitly allowing for an interruption setting. If the completion time is not urgent, the job is placed in the queue and printed when the apparatus is ready (col. 5 lines 15-23), implicitly allowing for a wait setting. Lobiondo allows the user to cancel a job being processed (col. 6 lines 37-38).

Satake explicitly discloses a wait setting and an interrupt setting; in Satake's system, the user can select connected mode 1, which allows the copiers to be separated and operated independently (obviously interrupting linked operation) and connected mode 2, which prohibits the copiers from being separated during a linked operation (waiting for linked operation to complete) (col. 3 line 63 - col. 4 line 6).

Lobiondo and Satake are combinable because they are from the same field of endeavor, namely distributing images among a plurality of image forming apparatuses.

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to allow for explicit wait and interrupt settings, as disclosed by Satake.

The motivation for doing so would have been to allow the settings of the apparatuses to be modified to wait or interrupt modes, as disclosed by both Lobiondo and Satake, without requiring the additional steps of entering completion times and altering completion times in order to achieve the intended results, as is required by Lobiondo.

Lobiondo also does not teach wherein each of the digital copying machines comprises a memory unit connected to a system controller via a system bus and configured to store a data of the document locally in the digital copying machine said unit comprising: a compression unit, configured to compress said data; a storage unit configured to store said compressed data received from said compression unit via a local bus in said memory unit and not via said system bus.

However, Imamura, in the same area of copying machine (column 1, lines 1-10), teaches printing devices comprises a memory unit (7, of fig. 2, and fig. 1) connected to a system controller (CPU, fig. 1) via a system bus (9, fig. 1) and configured to store a data of the document locally in the printing machine said unit comprising: a compression unit (26, fig. 1), configured to compress said data; a storage unit (24, fig. 1) configured to store said compressed data received from said compression unit via a local bus (local bus, fig. 1) in said memory unit and not via said system bus (fig. 1). Such configuration would solve the problem of conventional printing system and provides high speed image processing as taught by Imamura, column 1, lines 35-45, column 7, lines 1-22.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modify the copy machine to include: a memory

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unit connected to a system controller via a system bus and configured to store a data of the document locally in the printing machine said unit comprising: a compression unit, configured to compress said data; a storage unit configured to store said compressed data received from said compression unit via a local bus in said memory unit and not via said system bus.

In accordance with claims 29 and 42, Lobiondo does not disclose expressly that at least two of the units of the digital copying machines are directly connected to each other.

Satake discloses that at least two of the units of the digital copying machines are directly connected to each other (col. 2 lines 51-54 and figure 1 when line 9 is the direct connection).

In accordance with claims 30 and 43, Lobiondo discloses that at least two of the units of the digital copying machines are connected to each other through a network (col. 3 lines 20-24).

In accordance with claims 31 and 44, it would be inherent to dismiss the menu screen when the print job has finished printing because when the print job has finished printing, there is only one job being printed (which obviously should not be interrupted or waited upon since there is nothing to interrupt or wait on it for, since there is no other job to be processed).

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4. Claims 19, 22, 23, 26, 32, 35, 36, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobiondo (5,287,194) in view of Salgado (US 5,970,224) and Imamura (US 5,963,717).

In accordance with claims 19, 23, 32 and 36, Lobiondo discloses an image forming system with at least two units of digital copying machines 10 (figure 1) connected to each other and in which a plurality of the connected digital copying machines can share and execute one job (col. 4 lines 16-19).

Lobiondo further discloses that each of the digital copying machines 10 has a link copy function that a document set in one of the digital copying machines and at least two units of the digital copying machines share the job of executing copy operation on said document, and a printer function of printing according to a print request from the outside, Lobiondo discloses that the printing devices 10 of his system can share a job being processed in a linked manner (col. 4 lines 16-19), he further discloses that the type of data being printed can be print jobs sent from a computer (col. 3 lines 32-36), copy data or facsimile data (col. 3 lines 60-63 and col. 4 lines 35-39).

In accordance with claims 19, 23, 32 and 36, Lobiondo discloses that each of the copying machines permits a new print job (of either the type transferred from a computer or a copy job) to interrupt a print job (of either type) that is currently being processed but not yet finished (col. 4 line 66 - col. 5 line 9).

However, Lobiondo does not disclose expressly that this interruption process be based on the type of print job (i.e. print job transferred from a computer or copy job) being newly transmitted and currently printed (for Lobiondo it is based on urgency).

Salgado discloses that newly transmitted jobs are placed in a queue (col. 13 lines 27-30) and that if the priority of a newly transmitted job is higher than a job currently being processed, the job currently being processed is interrupted so that the newly transmitted job can be processed immediately (col. 13 lines 37-40). Salgado further discloses that the user sets priorities for jobs based on the type of incoming print job, namely whether it is a net print job (from a computer) or a copy job (col. 14 lines 28-50, where the numbers 1-6 show the default settings, which include prioritizing copy jobs over print jobs and vice versa). As seen in the options 1-6, it is possible to prioritize the different types of jobs with or without allowing for interruption, thereby allowing print job transferred from a computer to be printed with a higher priority than copy jobs with or without allowing for interruption of a copy job being processed before reception of the newly transferred job, and vice versa with copy jobs prioritized over jobs transferred from a computer.

Lobiondo and Salgado are combinable because they are from the same field of endeavor, namely distributing print jobs to image forming apparatuses.

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to allow Lobiondo's system to assign priority based on the type of job and interrupt accordingly, as disclosed by Salgado.

The motivation for doing so would have been to a) provide a "wide range of queue management so that the corresponding system can accommodate for both the specific needs of many different users and the many different types of uses demanded by those users" (Salgado: col. 3 lines 33-37) and b) "provide a queue management

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system for a multifunctional printing system facilitating the appropriate throughput of all types of jobs which might be encountered by the multifunctional printing system"

(Salgado: col. 3 lines 39-41).

Lobiondo also does not teach wherein each of the digital copying machines comprises a memory unit connected to a system controller via a system bus and configured to store a data of the document locally in the digital copying machine said unit comprising: a compression unit, configured to compress said data; a storage unit configured to store said compressed data received from said compression unit via a local bus in said memory unit and not via said system bus.

However, Imamura, in the same area of copying machine (column 1, lines 1-10), teaches printing devices comprises a memory unit (7, of fig. 2, and fig. 1) connected to a system controller (CPU, fig. 1) via a system bus (9, fig. 1) and configured to store a data of the document locally in the printing machine said unit comprising: a compression unit (26, fig. 1), configured to compress said data; a storage unit (24, fig. 1) configured to store said compressed data received from said compression unit via a local bus (local bus, fig. 1) in said memory unit and not via said system bus (fig. 1). Such configuration would solve the problem of conventional printing system and provides high speed image processing as taught by Imamura, column 1, lines 35-45, column 7, lines 1-22.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modify the copy machine to include: a memory unit connected to a system controller via a system bus and configured to store a data of the document locally in the printing machine said unit comprising: a compression unit,

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configured to compress said data; a storage unit configured to store said compressed data received from said compression unit via a local bus in said memory unit and not via said system bus.

In accordance with claims 22, 26, 35 and 39, Lobiondo discloses that at least two of the units of the digital copying machines are connected to each other through a network (col. 3 lines 20-24).

5. Claims 21, 25, 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobiondo in view of Salgado and Imamura in further view of Satake (US 6,078,759).

In accordance with claims 21, 25, 34 and 38, Satake discloses that at least two of the units of the digital copying machines are directly connected to each other (col. 2 lines 51-54 and figure 1 when line 9 is the direct connection).

6. Claims 20, 24, 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobiondo in view of Salgado and Imamura in further view of Sugishima.

In accordance with claims 20, 24, 33 and 37, Lobiondo and Salgado do not disclose expressly that each of the digital copying machines outputs images printed by printer operation and images printed by copy operation, based on the link copy function, to different paper output sections.

Sugishima discloses that each of the digital copying machines outputs images printed by printer operation and images printed by copy operation, based on the link copy function, to different paper output sections; in Sugishima's system, output images are collated into the proper order in separate bins, i.e. output sections (col. 3 lines 31 34).

Lobiondo, Salgado and Sugishima are combinable because they are from the same field of endeavor, namely distributing print jobs to image forming apparatuses.

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to collate the output of the printing system.

The motivation for doing so would have been to keep the pages of different print job separate and keep the pages of one individual print job together, thereby enabling the user to more quickly assemble the completed print job.

7. Claims 28 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobiondo in view of Satake and Imamura in further view of Sugishima (US 4,797,706).

In accordance with claims 28 and 41, Lobiondo and Satake do not disclose expressly that each of the digital copying machines outputs images printed by printer operation and images printed by copy operation, based on the link copy function, to different paper output sections.

Sugishima discloses that each of the digital copying machines outputs images printed by printer operation and images printed by copy operation, based on the link

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copy function, to different paper output sections; in Sugishima's system, output images are collated into the proper order in separate bins, i.e.; output sections (col. 3 lines 31 34).

Lobiondo, Satake and Sugishima are combinable because they are from the same field of endeavor, namely distributing images among a plurality of image forming apparatuses.

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art, to collate the output of the printing system.

The motivation for doing so would have been to keep the pages of different print job separate and keep the pages of one individual print job together, thereby enabling the user to more quickly assemble the completed print job.

Allowable Subject Matter

8. Claims 79, 80 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

With respect to applicant's argument that the cited references does not teach: a memory unit connected to a system controller via a system bus and configured to store a data of the document locally in the copying machine said unit comprising: a compression unit, configured to compress said data; a storage unit configured to store

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said compressed data received from said compression unit via a local bus in said memory unit and not via said system bus; has been considered.

In reply: Lobiondo also does not teach wherein each of the digital copying machines comprises a memory unit connected to a system controller via a system bus and configured to store a data of the document locally in the digital copying machine said unit comprising: a compression unit, configured to compress said data; a storage unit configured to store said compressed data received from said compression unit via a local bus in said memory unit and not via said system bus.

However, Imamura, in the same area of copying machine (column 1, lines 1-10), teaches printing devices comprises a memory unit (7, of fig. 2, and fig. 1) connected to a system controller (CPU, fig. 1) via a system bus (9, fig. 1) and configured to store a data of the document locally in the printing machine said unit comprising: a compression unit (26, fig. 1), configured to compress said data; a storage unit (24, fig. 1) configured to store said compressed data received from said compression unit via a local bus (local bus, fig. 1) in said memory unit and not via said system bus (fig. 1). Such configuration would solve the problem of conventional printing system and provides high speed image processing as taught by Imamura, column 1, lines 35-45, column 7, lines 1-22.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modify the copy machine to include: a memory unit connected to a system controller via a system bus and configured to store a data of the document locally in the copying machine said unit comprising: a compression unit, configured to compress said data; a storage unit configured to store said compressed

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data received from said compression unit via a local bus in said memory unit and not via said system bus.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 7, 2005

A handwritten signature in black ink, appearing to read 'K. Y. Poon', with a stylized flourish at the end.

**KING Y. POON
PRIMARY EXAMINER**